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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,078	04/10/2001	Ajit Chowdhury	780202.90075	8745

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EXAMINER

NAVE, EILEEN ENAD

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 07/03/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Offic Action Summary</b>	Application No.	Applicant(s)	
	09/832,078	CHOWDHURY ET AL.	
	Examin r Eileen E. Nave	Art Unit 1754	
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --</i>			
<b>Peri d f r Reply</b>			
<b>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</b>			
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>			
<b>Status</b>			
1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>4/10/01-3/21/02</u> .			
2a) <input type="checkbox"/> This action is <b>FINAL</b> .		2b) <input checked="" type="checkbox"/> This action is non-final.	
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
<b>Disp sition of Claims</b>			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-25</u> is/are pending in the application.			
4a) Of the above claim(s) _____ is/are withdrawn from consideration.			
5) <input type="checkbox"/> Claim(s) _____ is/are allowed.			
6) <input checked="" type="checkbox"/> Claim(s) <u>1-25</u> is/are rejected.			
7) <input type="checkbox"/> Claim(s) _____ is/are objected to.			
8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.			
<b>Application Papers</b>			
9) <input type="checkbox"/> The specification is objected to by the Examiner.			
10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner.			
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).			
11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner.			
If approved, corrected drawings are required in reply to this Office action.			
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.			
<b>Priority under 35 U.S.C. §§ 119 and 120</b>			
13) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).			
a) <input type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of:			
1. <input type="checkbox"/> Certified copies of the priority documents have been received.			
2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.			
3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).			
* See the attached detailed Office action for a list of the certified copies not received.			
14) <input checked="" type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).			
a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.			
15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.			
<b>Attachment(s)</b>			
1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.	
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)	
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> .		6) <input type="checkbox"/> Other: _____.	

## **DETAILED ACTION**

### ***Claim Rejections - 35 U.S.C. § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deer Co.*, 383 U.S. 1, 148 USPO 459

(1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

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made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanforth et al (US 5,202,033) in view of Diel (US 5,431,825).

Stanforth et al discloses an in-situ method of treating solid waste in soil or solid disposed waste containing unacceptable levels of leachable metals, such as arsenic, lead, cadmium, arsenic, zinc, copper and chromium, includes mixing the solid waste or soil place with a phosphate source of a carbonate source or ferrous sulfate (see Abstract). The treatment additives may be used individually or in combination such, as sodium phosphate, superphosphate, triple superphosphate, phosphoric acid, sodium carbonate, sodium bicarbonate, calcium carbonate and agricultural lime (col. 5, ln. 56-61). Ferrous sulfate can be used to control chromium leaching (col. 5, ln. 64-65). A second additive, a pH control agent, may be used in addition to the phosphate or carbonate additive to adjust the pH of the leaching heavy metal environment to the range where the heavy metal phosphate or carbonate salts are the least soluble (col. 5, ln. 49-53). The pH controlling agent is selected from the group consisting of magnesium hydroxide, magnesium oxide, calcium oxide and calcium hydroxide (col. 5, ln. 65-68).

Stanforth et al also discloses that dry mixing of the additive and pH control agent with the contaminated materials, i.e., disposed waste or soils, does not necessarily cause the reaction which convert the lead and arsenic into substantially non-leachable forms (col. 6, ln. 66-col. 7, ln. 2) and that the reactions may not occurs until the contaminated material is wetted naturally by rain or

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snow or until the mixture is analyzed using a leaching test (col. 7, ln. 21-23). Stanforth et al further discloses that in appropriate amounts, the mixture of the first additive and the second additive, the pH controlling agent, in solid waste will control the leaching of the metals under naturally occurring conditions (col. 7, ln. 23-27).

Stanforth et al does not disclose using a combination of the phosphate additive with the iron additive or also adding a chloride additive to the combination. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the phosphate additive with the iron additive and also add a chloride additive to the combination to the process of Stanforth et al because Diel teaches that chlorides and sulfates of Fe(II) are useful reducing agents (col. 3, ln. 28-31) for the treatment of hazardous waste in solid, liquid or sludge form containing leachable metals such as chromium, cadmium, lead and thallium (col. 2, ln. 53-55) and Stanforth et al teaches that the phosphate additive and the ferrous sulfate are individually useful for the treatment of heavy metals with ferrous sulfate is specifically used to control chromium leaching. Thus, it is *prima facie* obvious to combine equivalents known for the same purpose (e.g., control leaching of a combination of heavy metals). *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Stanforth et al does not specifically disclose the specific time and temperature for incubation, as recited in the instant claims. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the specific time and temperature for incubation, as recited in the claims, in the process of Stanforth et al because

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Stanforth et al teaches that the reaction may occur once the contaminated material is wetted naturally by rain; thus, normal outside temperatures encompass the temperatures, as recited in the instant claims, and any appropriate amount of time, such as those recited in the instant claims, would be sufficient enough since the incubation time is a results-effective variable, which one of ordinary skill in the art at the time the invention was made can determine the optimum or workable ranges of said variable through routine experimentation in order to complete the reduction of the heavy metals. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Stanforth et al does not specifically disclose the specific amounts of the different additives and/or alkali, as recited in the instant claims. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the specific amounts of the different additives and/or alkali, as recited in the claims, in the process of Stanforth et al because Stanforth et al teaches that the additives and alkali are results-effective variables, which one of ordinary skill in the art at the time the invention was made can determine the optimum or workable ranges of said variables through routine experimentation in order to effect the treatment of the heavy metals. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eileen E. Nave whose telephone number is (703) 305-0033.

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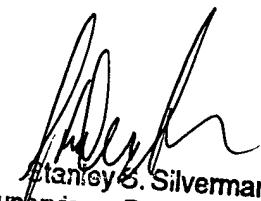
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (703) 308-3837.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9671 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Nave/een

June 30, 2002



Stanley S. Silverman  
Supervisory Patent Examiner  
Technology Center 1700